DOCUMENT RESUME

ED 329 047 EC 300 039

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TITLE What Happens to Students in Gifted Programs? The Learning Outcomes Study at the University of Virginia.
PUB DATE Nov 90
NOTE 14p.; Produced under the auspices of the National Research Center on the Gifted and Talented. Paper presented at the Annual Convention of the National Association for Gifted Children (40th, Little Rock, AR).
PUB TYPE Reports - Descriptive (141) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; *Academically Gifted; *Delivery Systems; Disadvantaged Youth; Elementary Education; Minority Groups; *Outcomes of Education; *Program Effectiveness; Self Concept; Student Adjustment; *Student Attitudes; Student Educational Objectives; Student Motivation

ABSTRACT

This paper introduces the Learning Outcomes Study at the University of Virginia, an ongoing 2-year investigation of over 1,000 elementary school children who entered one of 16 different gifted programs (or no program) in the fall of 1990. The study will compare effects of four examples each of four types of program delivery arrangements: (1) within-classroom (or mainstream type); (2) pull-out programs; (3) separate classes or ability tracking; (4) and special schools. Special comparisons will be made of program effects on minority and disadvantaged students. Information will also be collected on each program's curriculum, teaching methods and goals, as well as the background and training of program teachers, and student identification criteria. Students will be assessed four times: at the time of entry into a formal gifted program, at the end of their first year in the program, and at the beginning and end of their second year. Multiple outcome measures will assess student achievement, attitudes, and adjustment. Additional questions possibly examined include the relationship between self-concept and intrinsic motivation; whether these two concepts have a differential impact on achievement; and the behavioral adjustment of high achieving students. (18 references) (DB)

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What happens to students in gifted programs?

The Learning Outcomes Study at the University of Virginia

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Produced under the auspices of the National Research Center on the Gifted and Talented, funded by the Office of Educational Research and Improvement, United States Department of Education.

Abstract

There is surprisingly little research on what happens to students in gifted programs. A review of literature reveals few rigorous empirical studies which examine student changes associated with enrollment in a gifted program or which compare the effects of different types of programs. This paper introduces the Learning Outcomes Study at the University of Virginia, an ongoing investigation of over 1,000 elementary school children who entered one of 16 different gifted programs (or no program) this fall. For the next two years, we will assess changes in student achievement, attitudes toward learning, and socio-emotional adjustment. We will compare programs which deliver services within regular classrooms, periodically pull students out of the classroom, or segregate students in special classes or special schools. We will compare program effects on students of different ability, gender, social class, and ethnic background.

What happens to students in gifted programs?

The Learning Outcomes Study at the University of Virginia

Why do we place students in gifted programs? According to educators, theorists, textbook writers, and other authorities in gifted education, we place high ability students in gifted programs for several reasons. First, we believe that special programs will help them to learn more and achieve up to their potential. Second, we believe that challenging and enriching programs will stimulate creativity and foster positive attitudes toward learning. Finally, we believe that placement in a gifted program will have a beneficial effect on socio-emotional adjustment, enhancing self-concept or ameliorating problems stemming from lack of contact with peers of similar ability and interests. Broadly speaking, we might say that the three reasons for gifted programs are Achievement, Attitudes, and Adjustment: the three A's.

Although these reasons make sense, and we may believe them to be true, they must be recognized as assumptions or hypotheses rather than established facts. We decided to conduct a review of literature on the effects of gifted programs. Specifically, we set out to locate studies which systematically studied the effects of a gifted program over time. We placed no restrictions on the type of program or the kind of outcome measures, but we restricted our search to studies that used a pre-post design. Cook and Campbell (1979) describe the pre-post design as the most common design in social science and they consider it one of the most informative and defensible designs for quasi-experimental research.

We surveyed the last 20 years of articles in 3 leading journals in gifted education: Gifted Child Quarterly, Journal for the Education of the Gifted, and Roeper Review. We located only 7 studies. Thinking that we must have made a mistake, we expanded our review with a computer search of ERIC and PSYCLIT, but this added only one more published study and some

unpublished reports. While we do not claim to have located every published study in the past 20 years (send us any you know about!), we think the trend is clear. Although there are many theoretical articles, and articles which describe the curriculum or goals of different kinds of gifted programs, there are surprisingly few studies which have directly examined how students change over time after entering a gifted program. Research on the effects of gifted programs is generally sparse, unsystematic, and far from conclusive.

In a recent article on ability grouping, Robert Slavin (1990) described the research in gifted education as "generally very poor in quality" (p. 4). Unfortunately, other scholars tend to agree (Robinson, 1990; Shore, Cornell, Robinson, & Ward, in press). In these times of accountability in education, when programs must justify their effectiveness, and opinions must be supported by factual evidence, research in gifted education is -- unfortunately -- not so gifted!

On the positive side, we found several well-done studies which found reasonable evidence that some individual gifted programs are effective in meeting specific goals, such as improving creative writing skills or accelerating achievement in mathematics. However, we did not find replications of initial findings, and we did not find research on the comprehensive effects of gifted programs across major domains such as achievement, attitudes, and adjustment.

The Learning Outcomes Study

What happens when elementary school students are first placed in gifted programs? Do they achieve at higher levels? Do they develop more enthusiastic attitudes toward learning? How does placement affect their self-concept and behavioral adjustment? These are some of the key questions we are addressing in our prospective, two-year study of the effects of placement in gifted programs. This is a large-scale project which involves over 1,000 2nd, 3rd, or 4th grade

students from 16 different school districts in 10 states.

Our project is part of the National Research Center for the Gifted and Talented, which was established by the Jacob Javits Gifted and Talented Act of 1988, and funded by the Office of Educational Research and Improvement (OERI) in the U.S. Department of Education. The National Research Center is a joint Center shared by 4 universities, including the University of Connecticut, the University of Georgia, Yale University, and our University of Virginia. The overall director for the National Research Center is Joe Renzulli of the University of Connecticut, and the site director for the University of Virginia is Carolyn Callahan. The principal investigators for the Learning Outcomes Study are Dewey Cornell and Marcia Delcourt.

Study Design

The design of our study is a quasi-experimental comparison of students in different types of gifted programs employing repeated measures of student achievement, attitudes toward learning, and socio-emotional adjustment. Students are assessed at the time they enter a formal gifted program, typically in the 2nd grade, but in some cases in the 3rd or 4th grade. Later, they are re-assessed three more times: at the end of their first year in the program, and at the beginning and end of their second year in the program. In this way we hope to gain a comprehensive picture of what happens to students as they enter and proceed through two years of gifted education, considering both the initial effects of starting a program and the continuing effects of remaining in a program.

We are comparing students in different types of programs, as well as students who do not attend a gifted program. We are undertaking special comparisons of minority and disadvantaged students, to determine whether their progress is similar to that of other gifted program students.

One critical question we faced at the outset of our study was how to classify gifted programs. Do we classify programs on the basis of their teaching methods, their curricular goals, or the subjects they cover? Or how perhaps how they select their students or deliver their services? Gifted programs are so diverse that there are probably as many ways to classify programs as there are programs to classify.

We decided that the most straightforward and practical way to classify programs was to consider how services were delivered. This led us to settle on four basic program arrangements: within-classroom (or mainstream type) programs, pull-out programs, separate classes or ability tracking, and special schools. These four types vary in the degree to which they segregate gifted program students from regular classroom peers and they vary in time-involvement. They also have very different administrative and financial implications for the school district, which we must acknowledge may often be a more important determining factor in establishing a gifted program than educational goals or choice of curriculum.

Since the choice of program arrangement is a critical determining factor in many school districts, we felt it would be of great practical value to classify programs in this way. We wanted the results of our study to be highly applicable to everyday decision-making and planning in gifted education.

We recognize that there are limitations to this categorical approach. For example, there are many different kinds of pull-out programs, and it may be difficult to generalize with just four basic types of programs because the categories are too broad and heterogenous. There are two ways in which we attempt to compensate for this limitation. First, we do not choose just one pull-out program, or one example of any kind of program. Almost all previous research has been limited in this way. Instead, we will study 4 examples of each type of program. This will allow us to test

whether there is consistency across different examples of each type of program.

Second, we will consider other ways to classify the programs in our sample. We are collecting information on each program's curriculum, teaching methods, and goals, as well as the background and training of program teachers, and of course, student identification criteria. We will examine whether there are other, more important, program characteristics which are associated with positive learning outcomes.

Measures

As alluded to already, the outcome measures we decided to study fall into three general categories: Achievement, Attitudes, and Adjustment. We will assess Achievement in three ways with multiple measures. First, we will administer subtests from the Iowa Test of Basic Skills, including Reading, Science, Math, and Social Studies. We will also assess teacher perceptions of student achievement through grades and through teacher rating scales for learning, motivation, and creative behavior from the Scales for Rating the Behavioral Characteristics of Superior Students (Renzulli, et al, 1976). Finally, we will survey students and parents for student involvement in special projects such as science projects or creative writing projects, extracurricular accomplishments, and other achievement-related activities.

In the area of Attitudes, we will assess student attitudes toward learning from the Arlin-Hills Attitude Surveys (Arlin and Hills, 1976). We will also administer 4 subtests from the Harter Intrinsic/Extrinsic Orientation in the Classroom Scale: Preference for Challenge, Independent Mastery, Independent Judgement, and Internal Criterion for Success (Harter, 1981).

Personal adjustment will be assessed from the perspectives of student, teacher, and parent. Each student will complete the Harter Self-Perception Profile for Children (Harter, 1985), a self-

concept questionnaire with scales for academic self-concept, social self-concept, and general self-concept. Teachers and parents will complete the Achenbach Child Behavior Checklist on each student, allowing us to assess behavioral adjustment both at school and at home (Achenbach and Edelbrock, 1983, 1986).

Current Status

What is the current status of our project? We spent the summer and early fall engaged in negotiations with dozens of school districts. Those of you who have attempted to implement a study in multiple school districts know what kind of administrative, logistical, and procedural problems a project of this type will involve. Our most significant finding so far is to discover just how much we underestimated expenses for long distance phone calls, postage, and Federal Express.

Nevertheless, with the cooperation and enthusiastic support of many superintendents, administrators, principals, gifted program coordinators, research committees, teachers, and parents, we are now collecting the first round of data. In a few months we will have our data on-line and we will be able to produce some preliminary reports, including a psychometric study of our instruments as well as a descriptive study of baseline differences among students in different types of gifted programs.

There are some interesting theoretical and conceptual questions we hope to address concerning the correlations among our dependent measures. For example, we want to investigate the relationship between self-concept and intrinsic motivation, and whether these two concepts have a differential impact on achievement. We also want to examine the behavioral adjustment of high-achieving students, comparing the perceptions of teachers and parents.

Finally, we will begin to address the primary questions for our project after the second round of data collection, at the end of the school year. Then we will examine how well our baseline measures predict future performance in a gifted program, and how students in different types of gifted programs compare to one another. In closing, we hope that this project will help to fill a major gap in our knowledge of what happens to students who enter gifted programs.

Author Notes

This work is conducted as part of the National Research Center on the Gifted and Talented, funded by the Office of Educational Research and Improvement (OERI), U.S. Department of Education. We thank Joe Renzulli and Carolyn Callahan for their leadership in the National Research Center. We especially appreciate the hard work of our project staff, including Scott Hunsaker, Chris Lundberg, Guy Oram, Paula Pizzat, Catriona Rogers, and Anne Rom. Finally, we acknowledge the cooperation and assistance of the many teachers, administrators, and families involved in this study.

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Studies Identified in the Review of Literature

Author, Journal	Sample	Program	Major Findings
Coleman, 1983, GCQ	38 2/3 graders 24 controls	3 hr/week for 9 weeks creative wr. pull-out	improved writing abilities and attitudes
Parke, 1983, GCQ	22 K-2 students 22 high ability controls & 22 random controls	math self- instruction 3 hr/wk for 10 wks	improved math skills
Stoddard & Renzulli, 1983, GCQ	unknown number of 5/6 students in 4 districts; 2 pull-out, 1 in-class, 1 control	2 hr/week for 6 weeks writing enrichment	improved writing quality in both groups (better in within-class)
Carter, 1986, JEG	48 3rd graders in pull-out classes, 13 in nongifted control class	higher level thinking & independence for 8 wks	higher ach test scores in both areas
Stednitz, 1986 TECHSE	11 high ability students age 4-6, plus 54 others (33 treatment and 32 controls)	1/2 hr 3x/wk for 8 wks triad enrich. to improve self-efficacy	no treatment effect (no change in self- efficacy)
Aldrich & Mills, 1989 GCQ	32 5/6 students in 2 classes 20 controls	1 day/week for 1 year pull-out	improved reading & vocabulary, but not self-esteem
Olenchak & Renzulli 1989, GCQ	1698 students in 10 elem schools, 1 control school	schoolwide enrich 1 yr pull-out & in-class	improved attitudes toward gifted educ. by students and staff
VanTassel-Baska, Willis & Meyer, 1989, GCQ	19 3/4 graders in 1 classroom 20 controls	full-time class for 1 year	improved cognitive abilities but not clear if school attitudes self-concept were prepost

Note. Studies differ in quality and quantity of information reported.
Send us any other studies you know about!